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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/783,527

02/19/2004

Chi-Tsung Peng

JIL07

7162

7590

05/25/2007

J.C. Patents  
Suite 250  
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EXAMINER

CARTER, WILLIAM JOSEPH

ART UNIT

PAPER NUMBER

2875

MAIL DATE

DELIVERY MODE

05/25/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/783,527	Applicant(s) PENG ET AL.	
	Examiner William J. Carter	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Appeldorn et al. (5,432,876) in view of Hamburger et al. (5,995,686).

With respect to claim 1, Appeldorn teaches a plastic optical fiber bundle (Fig. 9) comprising a plurality of plastic optical fibers (2) with a plurality of depression (4) for producing a light leak effect (column 7, lines 25-33). Appeldorn does not explicitly teach each optical fiber having an inner core layer and an outer layer, wherein the outer layer of the optical fiber is formed with a plurality of depressions, the depressions expose the inner core layer, but do not extend into the inner core layer of the optical fiber.

Hamburger, also drawn to optical fiber, teaches an optical fiber (10) having an inner core layer (12) and an outer layer (14), wherein the outer layer of the optical fiber is formed with a plurality of depressions (20), the depressions expose the inner core layer, but do not extend into the inner core layer of the optical fiber (column 2, line 66-column 3, line 10). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the depressions into the layers of Hamburger in the optical fiber bundle of Appeldorn, in order to all light to escape from the optical fiber core (Abstract and column 3, lines 20-23).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Appeldorn in view of Hamburger as applied to claim 1 above, and further in view of Hulse et al. (6,550,952).

With respect to claim 2, Appeldorn and Hamburger teach all of the claimed elements, as disclosed above, except for a connector being installed between two of the illumination devices. Hulse, drawn to illumination, shows two illuminating devices (90, 91) being coupled with a connector (92). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the connector of Hulse in the illuminating device of Keplinger, in order to illuminate both ends of two connected light pipes (column 6, line 66-column 7, line 2).

Claims 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Appeldorn and Hamburger as applied to claim 1 above, and further in view of Keplinger (5,345,531).

With respect to claims 3, 4, 6, and 9, Appeldorn and Hamburger teach all of the claimed elements, as discussed above, except for explicitly teaching an illumination structure installed on each end of the optical fiber bundle; a luminary or a spotlight bulb installed in the illumination structure; a protection sleeve accommodating the plastic optical fiber bundle, wherein the depressions on the plastic optical bundle are randomly oriented; wherein the depressions are dot-shaped, "+" shaped, "-" shaped, square-shaped, and star-shaped depressions. Keplinger, also drawn to optical fiber, teaches an illumination structure (21) is installed on each end of the plastic optical fiber bundle (Fig. 5); a luminary (21) is installed in the illumination structure of the plastic optical fiber

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bundle (Fig. 5); and depressions (28 and 31) are dot-shaped (28) and square-shaped (31) depressions. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the illumination structure and depressions of Keplinger in the optical fiber bundle of Appeldorn, in order to improve the lateral emission of light flux over the length of the assembled fibers (column 1, lines 63-68). In regard to claims 5, 7, 8 and 10, it must be borne in mind that where two known alternatives are interchangeable for their desired function, an express suggestion of the desirability of the substitution of one for the other is not needed to render such substitution obvious. See In re Fout, 675 F.2d 297, 301, 213 USPQ 532, 536 (CCPA 1982); In re Siebentritt, 372 F.2d 566, 568, 152 USPQ 618, 619 (CCPA 1967). In this case, the applied prior art (Keplinger) establishes that both different orientations and alternatively shaped depressions were known alternatives (column 4, line 67-column 5, line 7). It would have been obvious to use the "+," "-", and star-shaped depressions of the present application as the depressions (33) of Keplinger. Lastly, one skilled in this art would readily appreciate that the addition of alternative orientations and shapes to the design of the depressions improves both the aesthetic value of the depressions and the adaptability of the depressions.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Carter whose telephone number is (571)272-0959. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea can be reached on (571)272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

wjc  
5/16/07

  
ALI ALAVI  
PRIMARY EXAMINER